



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW307D BYPASS RATIO: 4.2
 UNIQUE ID NUMBER: 03P15PW193 PRESSURE RATIO (π_{co}): 21.4
 COMBUSTOR: TALON II
 ENGINE TYPE: MTF RATED THRUST (F_{oo}) (kN): 29.9

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO _x	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	2.1	72.3	49.3	2.2
AS % OF ORIGINAL LIMIT	10.7	61.3	59.4	6.7
AS % OF CAEP/2 LIMIT (NO _x)			74.3	
AS % OF CAEP/4 LIMIT (NO _x)			75.0	
AS % OF CAEP/6 LIMIT (NO _x)			75.4	
AS % OF CAEP/8 LIMIT (NO _x)			79.8	

For non-volatile particulate matter (nvPM) emissions, please refer to the ICAO Engine nvPM Emissions Data Sheet.

DATA STATUS

- PRE-REGULATION
 x CERTIFICATION
 - REVISED (SEE REMARKS)

TEST ENGINE STATUS

x NEWLY MANUFACTURED ENGINES
 x DEDICATED ENGINES TO PRODUCTION STANDARD
 - OTHER (SEE REMARKS)

EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE
 (ANNEX 16 VOLUME II)

CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)
 - OUT OF PRODUCTION (DATE: -)
 - OUT OF SERVICE (DATE: -)

MEASURED DATA

MODE	POWER SETTING (% F_{oo})	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO _x	
TAKE-OFF	100	0.7	0.355	0.00	0.00	20.61	0.8
CLIMB OUT	85	2.2	0.277	0.00	0.02	15.44	0.9
APPROACH	30	4.0	0.112	0.00	2.57	7.85	0.0
IDLE	7	26.0	0.046	0.75	26.75	4.32	2.0
LTO TOTAL FUEL (kg) or EMISSIONS (g)			150	54	1997	1393	-
NUMBER OF ENGINES				3	3	3	3
NUMBER OF TESTS				4	4	4	4
AVERAGE D_p/F_{oo} (g/kN) or AVERAGE SN (MAX)				1.8	66.8	46.6	2.0
SIGMA (D_p/F_{oo} in g/kN, or SN)				0.5	3.4	3.5	0.5
RANGE (D_p/F_{oo} in g/kN, or SN)				1.2-2.4	62.7-70.2	43.4-51	1.4-2.5

ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS
 STAGE BLEED 0 (% CORE FLOW) AT - POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	99.1-99.3
TEMPERATURE (K)	294-299
ABS HUMIDITY (kg/kg)	0.0096-0.0122

FUEL

SPEC	Jet A-1
H/C	1.86-1.88
AROM (%)	21.6-21.2

MANUFACTURER: Pratt & Whitney Canada
 TEST ORGANIZATION: PW307 Development Engineering
 TEST LOCATION: Mississauga, Ontario, Canada
 TEST DATES: 24/06/2014-03/09/2014

NO_x REGULATION PARAGRAPH

	2.3.2 c) (CAEP/4)
	2.3.2 d) (CAEP/6)
x	2.3.2 e) (CAEP/8)

REMARKS

- Data from P&WC ER-8343-II
- PW307D Build Spec. 1318
- Engines tested: CH0005B25 (production standard development engine), CM0005B02, and CM0009B01
- Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16 Vol. II.
- NO_x levels in accordance with Part III, Chapter 2, 2.3.2 e) (CAEP/8)

Compliance with Fuel Venting requirements:

x ('x' if complies, 'PR' if pre-regulation, '- ' if information is not available)